# POPULISTS ARE SKEPTICAL TO EXPERT ADVICE BUT RESPOND TO BETTER ARGUMENTS

*Adam Peresman[1], Lars Thorup Larsen[1], Honorata Mazepus[2] & Michael Bang Petersen[1]*

[1] Aarhus University, [2] Leiden University

## Abstract:

Across diverse policy domains from climate to health policy, there is broad concern about whether popular trust in science and expertise has eroded during the past decade. This has generated discussions about the growing influence of low-trust populists whose alleged turn against science may weaken the possibility of democratic policy-making built on facts and expertise. Using large, quota-based surveys with over 7,500 respondents across five countries: the United States, the United Kingdom, the Netherlands, Denmark, and the Czech Republic, we try to understand how populism impacts people's willingness to follow expert advice across four diverse scenarios. Using preregistered vignette experiments, we vary the expert advice, its source, and the quality of the argument, to see what persuades populists and non-populists to accept expert advice. We find first that populism is associated with less willingness to accept expert advice, yet with variation between countries and topics. Second, we find that both populists and non-populists are similarly impacted by stronger arguments. Finally, we show that populists are more likely to judge advice as poorly reasoned and to perceive it as politically biased. Our study indicates that while the rise of distrust may be troubling, populists not only listen to expertise, but also respond to the same qualities of expert advice as others, even if their skepticism is higher. This suggests that expert authorities should try to build trust and provide strong justifications for their expert advice rather than write off populists as being beyond the scope of reason.

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## 1. Introduction

Even before the COVID-19 pandemic, a recurring theme in Western democracies was whether people had turned their back on science and knowledge in favor of a more politically motivated approach to expertise (see, e.g., Norris and Inglehart, 2016). Scientific issues related to gender, climate and medical treatments all became focal points for heated political discussions and concerns were raised whether we had entered a 'Post-Truth' era where people no longer listened to arguments or reason. Before finding any answers, the world was thrust into a pandemic where the relationship between politics and scientific expertise would provoke even more social resistance and distrust.

Several strands of research have sought to understand who are most likely to exhibit skepticism towards scientific expertise. Research has focused on identifying particular individual values or dispositions that predict such skepticism. Although certainly interrelated, previous research has pointed to technocratic attitudes (Bertsou and Caramani, 2022), a distaste of scientific communities (Mann and Schleifer 2020), or underlying populist attitudes (Eberl et al., 2021; Huber et al., 2022) as key explanations.

Importantly, many of these studies have approached the study of expert skepticism using general measures of distrust towards whole categories of expert authorities such as scientists, politicians, or mainstream journalism. While these measures allow respondents to express broad and symbolic forms of expert skepticism, such measures are different from how people often meet expertise in their everyday lives. This is often in the form of concrete, actionable advice from a specific expert, pertaining to a specific problem that people need to deal with, such as doctor's advice regarding a medical treatment. Following the ancient Roman idea that authority is a type of "advice which one may not safely ignore" (cited in Arendt, 2006, pp. 122), this paper focuses on the degree to which individuals are willing to follow expert advice in such concrete situations. Specifically, we ask: when are those skeptical of experts in general willing to listen to specific pieces of expert advice?

We focus particularly on populist attitudes. These are related to distrust in societal and scientific institutions (Eberl et al., 2023), and yet they are also associated with technocratic attitudes with a clear preference for expertise in governance (Bertsou and Caramani, 2022).

This combination of seemingly contradictory associations makes populist attitudes especially worthy to focus on. Additionally, with the rise of populist parties around the world, understanding better the attitudes of those most inclined to support them is especially worthwhile.

In order to understand what can make populists listen to expert advice, we focus on a number of factors that prior research suggests could enhance or diminish the persuasiveness of advice. First, we focus on who the authority is and how trusted it is. In this regard, it may be particularly important to populists whether the expert authority is perceived to be independent of government. Research indicates that independent expert sources are more likely accepted as authoritative than those identified with politics or governmental institutions (Bertsou, 2022). Second, the strength of the arguments presented by expert authorities is also a key factor (e.g. Petty et al., 1981). Individuals are unlikely to automatically defer to authorities, nor would we want them to. How well argued or evidenced a piece of advice is will likely influence its level of acceptance. Finally, the nature of the problem should influence how inclined citizens are to rely on expert authorities, for instance being more likely to follow advice on health issues rather than political ones.

To examine if these factors influence whether populists accept expert advice, we use large, preregistered, approximately representative surveys with a total of over 7,500 respondents across five countries: the United States, the United Kingdom, the Netherlands, Denmark, and the Czech Republic. These countries vary both in their levels of distrust towards expertise and public authorities, and whether expertise has historically been organized independently or more closely tied to the state. Our surveys combine multiple measures of individual characteristics, including a measure of populist attitudes. We begin our analysis with an overview of how populism is related to measures of trust for different societal authorities and how it is related to attitudes about the role of experts in society. This is an initial attempt to understand how populism is related to acceptance of expert advice. It also provides a background to the experimental results which follow. To recreate realistic situations where individuals would have to decide whether or not to accept what an expert is saying, we rely on vignette experiments. Our respondents go through four different vignettes, where we vary the underlying issue, the advice, the expert source, and the quality of the argument.

We find that individuals who score higher on populist attitudes are more reluctant to accept advice from experts. The strength of this effect, however, varies significantly depending on the context. Although we find that populists are less trusting of advice in general, we find no difference between populists and non-populists in how they respond to either argument quality or the source of advice. Both groups of people are more likely to accept advice if the argument is strong or if the advice comes from an independent, non-government source, however, in the latter case, with quite a small effect size, just reaching statistical significance. In exploratory analyses, we try to explain the apparent contradiction that populists are less likely to trust authorities, yet are equally impacted by changes in argument quality. We find that populists are generally more critical towards the quality of the vignettes' arguments and are more likely to perceive political bias – this effect was present for all vignette topics, but with very different baseline levels of perceived bias. While improvements in argument quality will lead to more acceptance among everyone, acceptance levels will likely not converge. As such, populism does not seem to involve a general rejection of expert authorities, but rather an attempt to hold them to a higher standard and with greater levels of skepticism.

## 2. Acceptance of expert authority

The status of knowledge and expertise in society can be analyzed through different conceptual lenses. Some concern the broader perceptions of science in society while others focus more on citizens' trust in expert institutions, such as health or environmental agencies. Classic approaches in political science often focus on diffuse measures of system support, such as legitimacy or trust in institutions. In contrast, we use the *acceptance of advice* from expert authorities as the key concept and effectively as the main dependent variable. Unlike legitimacy or trust, this measure is more directly tied to action, and therefore better enables us to understand why people accept or reject expertise in practice.

The approach is based on a modernized version of Weber's seminal definition, that authority is "...the probability that certain specific commands (...) will be obeyed by a given group of persons" (1978, pp. 212). The definition focuses on lay perceptions, not on who the authorities are. It also ties acceptance to specific 'commands' rather than submission in general. This has recently been applied to study lay people's acceptance of different types of professional authority (Author, 2021a), whether certain types of professional advice are necessary to follow,

when faced with problems or choices relevant to the given form of expertise. For example, medical authority depends on the fact that patients view medical problems as sufficiently serious or complex that ignoring or going against medical advice would be risky. In other situations or contexts, however, some groups of citizens may feel entirely 'safe' going against expertise. Therefore, we need to consider the situations and contexts where popular perceptions reject or ignore advice from experts.

Our approach to acceptance of authority may be connected with existing research on why people cognitively accept or reject advice from experts. For example, Philipp-Muller et al. (2022) show that attitudes towards expertise depend on both the source of expertise, its recipient, quality, and the format of delivery. Taken together, these factors matter for the pursuit of different (informational) goals (Kunda, 1990). People are generally not as gullible as media stories may lead us to think, but rather they use epistemic 'vigilance' to form correct beliefs about the world (Mercier, 2020). However, while in general people seek information that is useful, the useful information can sometimes be truthful and sometimes not (Boyer, 2018). This is a difficulty faced by everyone when making decisions which rely on others. To get reliable information, people need to confront its source, and the quality and validity of the arguments (Mercier and Sperber, 2017). We should not automatically set acceptance as the default or correct behavior, but investigate what explains both acceptance and rejection.

**3. Populism and acceptance of expertise**

The existing literature on populism provides useful starting points for understanding how negative perceptions of elites may translate into rejections of expert advice. Negative evaluations of expert advice can be activated by exposure to populist cues in the form of anti-elite narratives (Bos et al., 2019; Hameleers and Van Der Meer, 2021), emotionalized blame attribution (Hameleers et al., 2017), or the framing of elites as ‘‘abusing the system for their own gain’’ (Busby et al., 2019, pp. 618). These effects appear as particularly potent among the public with pre-existing negative perception of scientists (Hameleers and Van Der Meer, 2021).

While much existing research has focused on the effects of populist messaging, our analysis focuses on the demand side of populism – individuals with populist attitudes – because we would expect them to be harder to persuade given their negative perceptions of elites. Populism has been defined as an “ideology that considers society to be ultimately separated into two

homogeneous and antagonistic groups, 'the pure people' versus the 'corrupt elite,' and which argues that politics should be an expression of the volonté générale (general will) of the people" (Mudde, 2007, pp. 23). This represents a thin-centered ideology which necessarily combines with other ideologies (Mudde, 2004). Consequently, the exact content of populist ideologies is highly context dependent and individuals who score high on populism can pursue either inclusive, egalitarian, left-wing goals or exclusionary, nationalist, right-wing goals (Akkerman et al., 2014).

Although populism represents a response to the "corrupt elite," relationships between populism and measures of trust are not straightforward. Most intrinsically, populism is related to *political* (dis)trust, yet the two are fundamentally different constructs (Geurkink et al., 2020). This explains why political distrust is only inconsistently associated with support for a populist party (Rooduijn, 2018). Furthermore, moving beyond political distrust, research indicates that populists still hold technocratic beliefs (e.g., Bertsou and Caramani, 2022), even while in combination with a tendency towards distrust of expert and scientific institutions (e.g., Eberl et al., 2023).

Though previous research has found relationships between populism and various forms of anti-elite sentiment and distrust, it is primarily directed towards the ruling government (Castanho Silva et al., 2020; Erisen et al., 2021; Wuttke et al., 2020), and it remains underspecified to what degree other targets such as experts are equally affected (Castanho Silva et al., 2018). It is even more uncertain how populists will act in concrete scenarios, where they are being asked to do more than simply indicate their level of trust. That said, expertise is almost by definition tied to exclusive scientific or professional elites, and we expect, in line with the literature, that populist distrust will likely broadly impact trust levels in these groups. As a consequence, for our vignette experiments, we hypothesize that *higher levels of populism is associated with less acceptance of expert advice (H1).*

Nevertheless, (dis)trust in expert advice is not fixed. As the recent study by Bergan et al. (2022) illustrates, in times of expert consensus, even populists with high levels of pre-existing expert distrust can be persuaded by expert cues. This finding aligns with previous studies demonstrating that expert agreement alters the acceptance of issued advice (Lewandowsky et al., 2013; van der Linden et al., 2019). While we argue that populism is likely associated with

lower acceptance of advice, we believe how they act in these scenarios represents something different than expressing distrust in expert groups, especially considering the associations between populist and technocratic attitudes (Bertsou and Caramani, 2022). And furthermore, though we expect the general tendency to be towards less advice acceptance, there may be variation across countries and issues, in part due to local context and the politicization of topics.

*Seeing experts as independent or as elites*

Skepticism of expert advice may be triggered when different elites are perceived as being too closely connected, and if experts or scientists are seen as being aligned with or dependent on the government and political elites (e.g. see the study of populist attitudes and climate science by Huber et al., 2022). Many governments draw on the expertise of scientists and other technocratic bodies to explain or legitimize particular policies, as was very visible during the corona pandemic, blending scientific and political authority in the public eye. One recent study showed that citizens have a clear preference for involving *independent* experts in the process of policy-making and implementation, especially on more complex issues (Bertsou, 2022). However, actual independence does not automatically increase acceptance of authority, because populists may also view independent experts as aloof or even in direct opposition to the people. For example, a recent study found that some conservative groups broadly trust science, but still have deep distrust of scientists and scientific communities - indicating that they perceive experts as representing other values besides pure science, for instance some sort of political bias (Mann and Schleifer, 2020).

Establishing what constitutes a credible independent source of expertise is not straightforward. When it comes to following expert advice, Author (2021a) has demonstrated that most citizens are willing to follow professional advice if they perceive it as based on specialized expertise relevant to a specific problem, even in situations where the advice involves painful or costly consequences. However, if advice is perceived to be politically motivated, individuals may more easily write it off as biased rather than based on compelling expertise.

Following these arguments, we first formulate a set of hypotheses about the effect of different sources that should apply universally, and subsequently we investigate how the populist attitudes may alter these effects. In general, we hypothesize that *acceptance of advice is higher when supported with an additional, expert source compared to no additional expert source*

*(H2).* Furthermore, in line with the argument about the importance of independence of expertise, we hypothesize that *acceptance of advice is higher if that additional expert source is independent, rather than affiliated with the government (H3).*

As populism has been associated with distrust of authorities, populists may react less strongly to expert sources, because they might associate the experts with elites rather than with expertise itself (Mann and Schleifer 2020). Therefore, we hypothesize that *the impact of an expert source is moderated by populism, whereby acceptance levels among those scoring higher in populism will be less impacted by an expert source (H4).* However, to the extent populists are influenced by expert sources, we would expect them to care more about the independence of the source than non-populists. Although it may be related to many forms of trust, populism (and its measurement) is focused most specifically on *political* distrust (Castanho Silva et al., 2020). Hence our next hypothesis is that *the independence of an expert source will have a greater impact on acceptance levels among those scoring higher in populism (H5).*

*Quality of information*

When pursuing accuracy goals, credible and high quality information is of crucial importance. Especially when wrong information can have disastrous consequences, people should pay attention to the quality of arguments presented (Mercier and Sperber, 2017, pp. 209). For example, despite the fears and narrative of post-truth society (Iyengar and Massey, 2018), during the COVID-19 pandemic, citizens turned overwhelmingly to reliable sources of information (Altay et al., 2022). Moreover, in situations of low trust in the source of information, claims supported by stronger arguments should be more convincing (Mercier and Sperber, 2017, pp. 194).

Following the assumption that the quality of evidence is important for individuals to achieve accuracy goals, we hypothesize that *acceptance of advice is higher when supported with a strong vs. weak argument (H6a)* and that *respondents will adjust their future trust levels towards expert authorities either up or down depending on whether the argument they receive is strong or weak (H6b).*

Although populists are distrustful of authorities and may be inclined to follow less mainstream sources, we would expect them to still be persuaded by good quality arguments. To the extent

that they are reluctant to follow experts as authorities, we may see that argument quality is especially important. Hence, we hypothesize that *the impact of the quality of an argument on acceptance of advice and future trust levels in the expert authorities behind the advice will be greater among those who have higher levels of populism (H7a&b)*.[1]

Beyond looking at overall effects, we are interested in any differences we see in the results for different topics or countries, to understand better how consistent the patterns are. Additionally, we explore other ways in which populists may differ from non-populists in how they judge the advice they get. This will help us to better understand our findings as well as get a fuller picture of how populist attitudes may impact expert advice acceptance.

## 4. Methods

In this section we discuss the experimental design used to test our hypotheses. This includes our data source, the structure of the vignettes, our variables, as well as the modeling strategy. In addition to the experimental analyses described here, in Section 5 below, we approach the question from another angle: what do populists themselves think about the role of experts in society? Although not allowing for experimental manipulation, by looking at this descriptive evidence we can better see how populists themselves understand the relevant issues – and as a result, we can put the experimental evidence in a more complete context.

### *4.1 Data source*

We obtained ethical approval for our data collection on 31 May, 2022 from [redacted]. To increase the generalizability of our findings, we launched surveys in five countries with different traditions of populism and expertise: The United States, The United Kingdom, Denmark, The Czech Republic, and The Netherlands. Some have experienced major populist turns against elites, either politically (Brexit vote in the UK, the election of Trump in the US), or in the form of widespread vaccine hesitancy even before COVID-19 (Czech Republic; WHO

[1] These hypotheses as well as the form of their analysis were preregistered June 25th, 2022. https://osf.io/jg4wr/?view_only=bfb2ad480b154687ab3cc3db7a4b295a Note: We slightly diverge from the pre-analysis plan in the main text of the paper. In the appendix we discuss all divergences and shows the full results of all analyses. Also note: we reuse the survey as well as the vignettes for other preregistered and planned analyses. The purpose of each analysis differs and including all in one publication would be unmanageable.

2014). In contrast, Denmark and the Netherlands have had only milder experiences of this sort. Another difference is whether scientific and professional elites have been traditionally organized in close proximity to the state (DK, CZ), or in relatively autonomous scientific societies (UK, US and NL) (Svensson and Evetts, 2010). For each country, we slightly exceeded 1500 respondents. All surveys were given in the local, majority language.

The surveys were launched through Qualtrics Panels and had quotas for education level, gender, age, and region.[2] See Table 1 for basic demographics of the sample. Qualtrics Panels scrubbed the data to remove bad respondents. These included people who were taking the survey from the wrong country, took the survey multiple times, gave straight-line answers, sped through the survey, failed attention check questions, and so on.

**Table 1:** Basic demographics for the total sample

| **Sex** | **Percent** |
|---|---|
| Male | 49 % |
| Female | 51 % |
| | |
| **Age** | |
| 18 – 24 | 12 % |
| 25 – 34 | 19 % |
| 35 – 44 | 18 % |
| 45 – 54 | 18 % |
| 55 – 64 | 16 % |
| 65 – 74 | 15 % |
| 75 – 84 | 02 % |
| | |
| **Education** | |
| Below university | 64 % |
| University | 36 % |
| | |
| **Location** | |
| Non-urban | 57 % |
| Urban | 43 % |

Notes: Total number of respondents is 7883.

[2] For all countries it was difficult to locate respondents at the lowest education level, and so that quota was merged with the next level up. Data collection took longer than expected and when less than 100 participants were remaining for each country, the quotas were fully released to finish the data gathering process. Details on quotas - and what was achieved can be found in the appendix.

Despite the demographic quotas which were employed, we found that the sample leaned left. After the respondents read all the vignettes they answered a comprehension check question which asked them to identify the vignette topics from a list. The overall pass rate (getting all correct) was 71%, with Danish participants scoring highest (77% pass) and Americans the lowest (59% pass). In this article we use only the participants who passed the comprehension check question, however, we present the main results with the full sample in the appendix.

### *4.2 The vignettes*

In order to test our hypotheses, each participant was presented with four different vignettes. These covered different situations, two medical, two political, where they were presented with an argument either for a particular medical approach or to support a political proposal. The cases concerned climate change policy, treatment for a child who says he is transgender, immigration policy, and whether to give birth at home or in a hospital. We wanted to vary the topics covered to increase generalizability, and we also wanted to see how people responded to arguments and expert advice in both political and non-political contexts, given how expertise may be perceived as politically biased (Mann and Schleifer, 2020). The transgender vignette arguably blends the two, given the politicized nature of the topic. We varied both the argument quality, with stronger and weaker versions of each argument, as well as the side of the issue each argument was on.

It is obviously easier to accept claims that align with people's prior beliefs, whether these are political values or factual claims. People generally examine messages less critically if these confirm existing attitudes or come from sources already perceived as trustworthy or persuasive (Ditto and Lopez, 2005; Druckman and McGrath, 2019; Pornpitakpan, 2004). Therefore it was important to provide opposing positions on each topic.

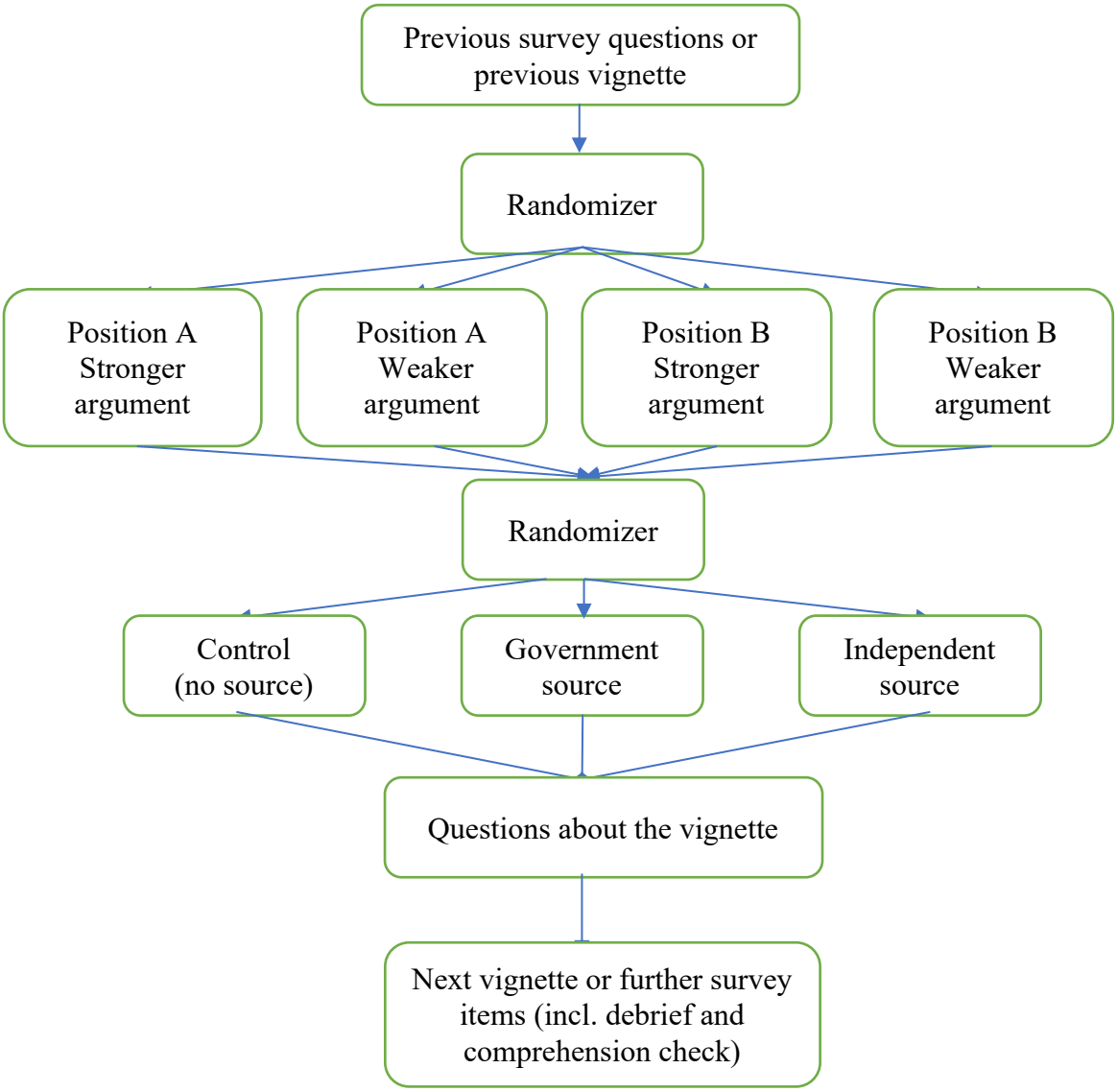
Argument quality involves a large set of attributes that go beyond formal logic of statements included in the argument (Hahn, 2020). Both strong and weak arguments can take many forms and score high or low, for example, on propositional logic, validity of syllogisms, causal inference, emotional appeals, precision of the language, and appeals to authority (Hahn, 2020, pp. 369; Jaccard and Jacoby, 2019, pp. 93). One important aspect of a strong argument is provision of supportive evidence or demonstration of the relevant expertise (Harris et al.,

2016). While a strong argument contains an accurate report of evidence, a weak argument 'bears no systematic relationship with the evidence' (Harris et al., 2016, pp. 1504).

Following this, we wrote our stronger and weaker arguments according to simple rules. The stronger arguments gave logical reasons and explanations for their positions and pointed to evidence in the form of research. The weaker arguments would give no evidence, or even say there was no evidence, and would give poor reasons, often saying something to the effect of "this is what is usually done" – but without saying why. After each vignette we asked the respondents to rate how well-reasoned the arguments were. Pooling across all countries, we found that for all eight topic-position combinations, the stronger arguments were rated as stronger than the weaker ones ($p < 0.001$). The average strong argument was rated at 3.37, and the average weak argument was rated 2.99, on a 5 point scale.

After each argument, the respondents were given either an additional expert source as backing for the argument, or no source. We varied whether the expert source was a government source or an independent source, such as researchers at a university. For each case, we randomized which conditions the respondents received. After each vignette, respondents were asked a series of questions, including whether they would accept the advice (if it was medical) or support the proposal (if it was a political suggestion). After the vignettes, the respondents were debriefed that the scenarios and advice were completely hypothetical and not necessarily worth following. The full vignette texts, in English, are presented in the appendix. See Figure 1 for a diagram of the relevant survey flow.

**Figure 1:** Survey flow




### *4.3 Variables*

Our main dependent variable concerns argument acceptance. For additional analytical leverage, we also measure how the argument impacts on future trust levels towards the experts behind the argument.

The acceptance item reads either "*How likely is it that you would support the proposal?*" or "*How likely is it that you would follow this advice?*", depending on the topic of the case. The future trust item reads either "*After reading this scenario, would you be more or less likely to trust the experts behind this proposal?*" or "*After reading this scenario, would you be more or*

*less likely to trust the experts behind this advice?*" Both are measured on five-point Likert scales.

*Key Independent Variables*

Our main independent variable is a measure of populism from Castanho Silva et al. (2018). We chose this version of populism as it represents a validated measure of populism with high levels of discriminatory validity and because it follows good methodological practices, such as including negatively worded items. Additionally, a study comparing a number of commonly used populism measures showed that this one has relatively high internal coherency and cross-national validity (Castanho Silva et al., 2020).

The scale relies on three subscales: people-centrism, anti-elitism, and Manichean outlook. As these subscales represent separate constructs, the whole scale was not found to have a high Cronbach's alpha in any country. It ranged from 0.39 (US) to 0.57 (CZ). We do not believe this to be a problem, as it is a likely result of its composite nature. Populism represents a noncompensatory concept in which the three subscales are only weakly correlated with each other. Following recommended procedure, we computed the aggregate measure of populism by first re-scaling each subscale from 0–1, and then multiplying them with each other (Castanho Silva et al., 2020; Erisen et al., 2021). The effect of this is that individuals who score quite low on even one facet of populism will score low on the overall scale, as the presence of all three facets is generally judged as necessary for one to be considered populist.

*Demographic and Control Variables*

In our models we also have a number of demographic and control variables. For respondent demographics, we will control for their age, income, education level, and whether they live in an urban environment. As income levels vary considerably by country, each country's survey had a different income scale in the survey. Our measure of education is a binary measure, where 1 indicates that the respondent has obtained a university-level education or higher. We include demographic control variables in our models, despite randomization, to get a more precise estimate for our variables of interest. The usage of these variables was included in our preregistration.

In order to evaluate whether our results regarding populism are driven by ideology or party, we also control for both of these in particular analyses. Party is measured with long lists of the major parties (as well as an "other" option) for each country. Ideology is measured with four ideological questions, covering various economic and cultural issues, adapted from the Chapel Hill Expert Survey (Jolly et al., 2022). In The Czech Republic and The Netherlands, the Cronbach's alphas were only 0.30 and 0.41, respectively, suggesting that ideology is not a one-dimensional phenomenon there. The scale had an alpha above 0.60 in all other countries, displaying the highest value in the US (0.73), indicating the greatest degree of ideological constraint there. The correlation between the overall ideological scale and our measure of populism was only $r = 0.03$ and the correlations between the individual ideological items and our measure of populism were all very low as well, not exceeding $r = 0.14$. This indicates that the results for populism are likely not driven by any ideological measure.

As we have a number of scenarios which we are pooling together, we will also have a fixed effects variable for the different scenarios. We will also have a fixed effects variable for the country the respondent is coming from.

### *4.4 Modeling strategy*

Except where indicated, all main analyses use multilevel models, pooling over both country and case. As each respondent will be replicated four times in the dataset, we have a random intercept for each respondent. We are presenting the results for those who passed the post-vignette comprehension check question. The results, however, are largely unchanged from the full sample and we present the main analyses using both samples in the appendix. All IVs are transformed to be on a 0-1 min-max scale to help with comparability and comprehension. Our analysis diverges in minor ways from what we preregistered, and therefore we have included in our appendix a section explaining these divergences. They had minimal impact on our substantive results and in the appendix we present the analyses exactly as planned in the preregistration.

## 5. Describing populism in our sample

The core of our analysis attempts to understand how individuals with varying levels of populist values respond to expert advice in specific scenarios. However, in order to understand more fully how populists relate to expert advice, we begin by analyzing how populism relates to general measures of expert trust, as well as specific attitudes towards expertise. This combines research threads which have examined relationships between populism and technocracy (e.g., Bertsou and Caramani, 2022) and between populism and general measures of trust (e.g., Geurkink et al., 2020; Huber et al., 2022). We show in this section that populists' general distrust does not translate into a general opposition towards the position of experts in society. We find that populists and non-populists are quite similar in how they see the role for experts. That populists have general distrust, yet see the need for expertise, indicates that it is important to understand how populists deal with expert advice when they are presented with it in concrete scenarios.

To show the impact of populism in a comprehensible way and using realistic numbers, we separated our sample into those who scored in the top quarter of the populism scale, and those who scored in the bottom quarter. For purposes of simplicity, we call these groups populists and non-populists, respectively.

In our survey we asked our respondents how much trust they have for 15 different institutions and types of individuals in society. This included political and governmental groups, media, and scientific institutions.[3] Averaging the whole battery together we formed a trust scale (alpha = 0.91), running from 1 (completely distrust) – 5 (completely trust). The mean for populists was 2.8, while for non-populists it was 3.5. The difference here corresponds to approximately 1.1 standard deviations on the trust scale. An alternative way of looking at this, reflected in Table 2, is to see what percentage of each group is generally trusting, with a score greater than 3. This adds simplicity and comprehensibility, although with the drawback that the size of the difference is ignored. We argue, however, that which side of the equation someone is on – whether they trust or distrust – gets at the crux of the matter.

[3] In the US we asked about specific cable news channels as well, however we have excluded that from this analysis.

In our pooled sample, we see that 80% of non-populists are generally trusting in society and societal institutions, whereas only 35% of populists are. We include in the table below four specific items from that scale: politicians, the national government, scientists, and specialized regulatory agencies (like the CDC or EPA in the US). Although the scale has a high Cronbach's alpha, we see notable differences between these items. Politicians and the national government are much less trusted (by both groups) than scientists and regulatory agencies. Scientists are the most trusted group, with even a majority of populists indicating trust. Among non-populists the national government is more trusted than politicians, but populists basically have no trust for either.

Although the two groups displayed notable differences on measures of trust, in many ways their attitudes towards experts, and the role of experts in society, were not wholly dissimilar. We asked our respondents to rate the acceptability of different kinds of actions taken by regular citizens, experts, and governments – actions which relate to the role of experts and expertise in society. Although there were differences between the groups, in many ways they were quite alike, echoing previous research on populism and technocratic attitudes (Bertsou and Caramani, 2022). As with our measures of trust, we transformed their responses into a dichotomous variable, indicating whether they generally found the action acceptable or not.

**Table 2:** Populism, trust, and attitudes towards expertise (in percent)

| | **Pooled** | | **CZ** | | **DK** | | **NL** | | **UK** | | **US** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Pop** | **Non** | **Pop** | **Non** | **Pop** | **Non** | **Pop** | **Non** | **Pop** | **Non** | **Pop** | **Non** |
| **Measures of trust** | | | | | | | | | | | | |
| Overall societal trust | **35** | **80** | 31 | 78 | 35 | 86 | 34 | 82 | 34 | 70 | 39 | 72 |
| Politicians | **4** | **28** | 2 | 16 | 7 | 36 | 5 | 33 | 2 | 15 | 4 | 21 |
| The national government | **8** | **47** | 6 | 33 | 11 | 53 | 8 | 56 | 4 | 30 | 14 | 46 |
| Scientists | **62** | **87** | 60 | 88 | 63 | 86 | 48 | 88 | 70 | 87 | 66 | 89 |
| Specialized regulatory agencies | **45** | **77** | 41 | 74 | 34 | 76 | 37 | 78 | 57 | 80 | 49 | 75 |
| | | | | | | | | | | | | |
| **Acceptability** | | | | | | | | | | | | |
| Individuals ignoring what scientific experts say. | **18** | **14** | 17 | 13 | 15 | 12 | 25 | 15 | 13 | 17 | 20 | 11 |
| Criticizing experts on social media. | **28** | **22** | 22 | 20 | 34 | 21 | 51 | 36 | 21 | 13 | 21 | 19 |
| Following expert advice without own research. | **17** | **29** | 15 | 32 | 13 | 30 | 15 | 30 | 24 | 28 | 16 | 24 |
| Scientists exaggerating findings to get compliance. | **8** | **4** | 13 | 8 | 6 | 3 | 9 | 6 | 4 | 3 | 6 | 7 |
| Scientists publicly advocating for political policies. | **22** | **33** | 16 | 24 | 27 | 39 | 27 | 38 | 24 | 20 | 19 | 27 |
| Experts pressuring gov. to change policies. | 49 | 47 | 44 | 51 | 54 | 45 | 42 | 46 | 61 | 51 | 45 | 50 |
| Politicians supporting policies against what experts say. | **8** | **12** | 9 | 8 | 11 | 14 | 9 | 13 | 4 | 8 | 8 | 10 |
| Gov. allowing scientific experts to determine policy. | 30 | 32 | 18 | 31 | 27 | 27 | 32 | 34 | 48 | 41 | 26 | 33 |
| Officials putting pressure on experts to support gov. policy. | 6 | 6 | 10 | 10 | 4 | 4 | 8 | 8 | 2 | 4 | 5 | 7 |
| Gov. using finances to guide the direction of research. | 22 | 24 | 26 | 34 | 10 | 18 | 14 | 18 | 23 | 35 | 25 | 34 |
| Officials presenting science in a way that supports policy. | 13 | 15 | 13 | 12 | 8 | 8 | 13 | 25 | 13 | 27 | 16 | 23 |
| Gov. giving autonomy to public scientific institutions. | **34** | **44** | 28 | 59 | 34 | 38 | 29 | 46 | 44 | 46 | 34 | 44 |
| | | | | | | | | | | | | |
| **Respondents** | | | | | | | | | | | | |
| Percent of category total | 25 | 25 | 33 | 12 | 12 | 46 | 20 | 27 | 27 | 22 | 36 | 12 |

Notes: For trust and acceptability items, scale runs from 1 – 5, with the percentages above representing the percentage who answered > 3. Item text shortened here somewhat from survey. Two-tailed T-tests were carried out in the pooled sample, using the binary variables here. Bolding indicates a significant difference with $p < 0.05$.

Our acceptability items broadly covered three main areas: how individuals should act in relation to experts and expert advice, how scientists should behave (in part in relation to politics), and how politicians and government officials should relate towards experts and science.

In all three areas, the differences were very minimal between populists and non-populists. In fact, for five items there were no statistically significant differences between both groups. Both groups generally think it unacceptable for individuals to ignore expert advice or for politicians to support policies which contradict what experts say or to pressure experts to support government policy. As previous research has indicated (Bertsou and Caramani, 2022), and the results here demonstrate, populists are not averse to giving experts and expertise an important role in society.

The descriptive results above paint a picture of two groups which are very dissimilar in terms of trust, but very similar in terms of their ideas about the role of experts in society. The trust measures may help explain this. If both groups trust scientists and experts more than politicians and government officials, it would make sense for both groups to advocate for expert opinion to play a large role in governance. One caveat here is that the items which make up the populism scale are focused on government. Low trusting individuals are not necessarily populists, and our populism measure would specifically pick up individuals who distrust government. What we can say is that people who distrust government are not equally distrusting of scientists and regulatory agencies, nor are they particularly non-technocratic in their views.

When looking at country differences, we can look for two separate kinds of differences. First, does the distribution of populists and non-populists vary by country? And second, do populists and non-populists have very different attitudes in different countries?

The least populist country is Denmark, where only 12% are populists and 46% are non-populists. The most populist countries are The Czech Republic and The United States, both with populists making up over 30% of the sample and non-populists at only 12%.

In general, the differences we see between countries in terms of responses of populists and non-populists are minimal and unsystematic. The patterns we see for the pooled sample are largely replicated in each country. If we look at the overall measure of societal trust, we see that the

populists range between 31% and 39%, while the non-populists range from 70% to 86%. These findings indicate that populists have lower levels of trust in a variety of institutions, as compared to non-populists, but their distrust is most acute for governmental targets. Despite this, however, and reflecting previous research (Bertsou and Caramani, 2022), populists in our sample are broadly technocratic. Our contribution in the following, experimental section is to disentangle this apparent contradiction, and understand better its implications. How do populists respond in complex scenarios where the arguments given are strong or weak, and possibly supported by either government or independent authorities?

## 6. Experimental Results

The descriptive results we see above demonstrate that one's level of populism is associated with large differences in levels of trust, and yet populists and non-populists are not miles apart on questions regarding the role of experts or expertise in society. As such there is some prima facie evidence that populists are willing to accept expert advice. To analyze this possibility in more detail, we turn towards the results of our experiments. In this section we first carry out our planned analyses, describing how populism, advice acceptance and potential moderators (expert source and argument strength) relate to each other in our vignettes. Then, we explore why the patterns we see may be present.

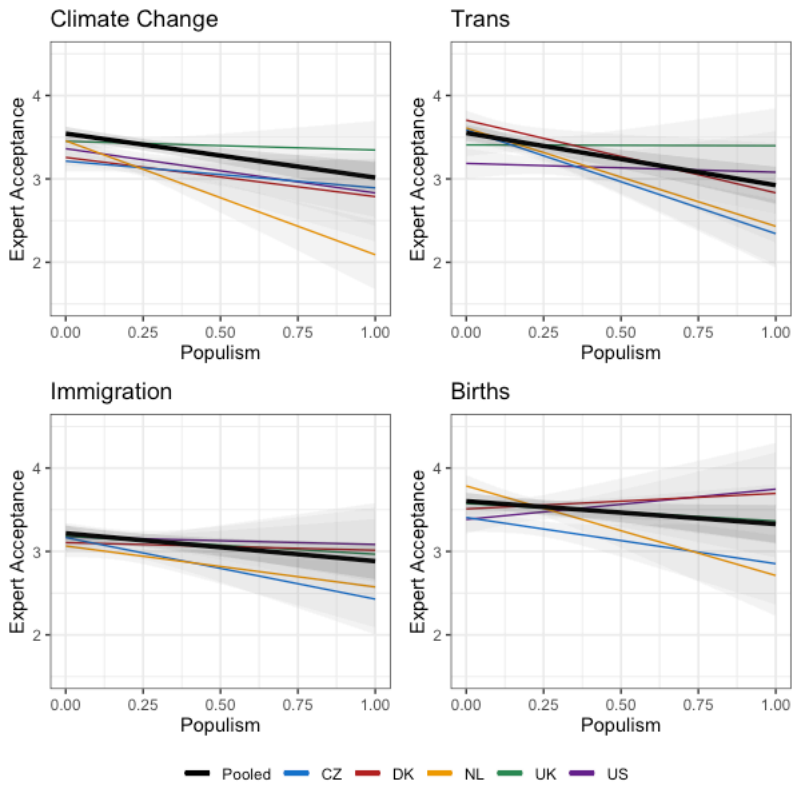
### *6.1 Does populism predict less acceptance of expert advice?*

We first hypothesized that higher levels of populism would be associated with less acceptance of expert advice **(H1)**. This is what we found (*B = -0.44, p = 8.76e-10*). Populism is considered to be orthogonal to ideology and party, and both in pooled and country-based analyses these results were robust to the inclusion of ideological and party covariates. This indicates that distrust of expertise and its effects are not simply the downstream effects of ideological movements. Full regression tables, including for these robustness checks can be found in the appendix

Our analysis so far has pooled together the four vignette topics as well as the five countries. It may be that these relationships vary considerably by topic or by country, and the pooled results

could theoretically be reflecting strong effects in only a few cases. Therefore, we have disaggregated our analysis. This can be seen in Figure 2.

**Figure 2:** Disaggregation of results by topic and country




Notes: Predicted values based on OLS models. The pooled models included fixed effects for country.

By disaggregating in this fashion, we do indeed see some differences between topics and countries. In all four cases, the pooled estimate is significant, yet there is variation in how large of an effect we see. The birth vignette displayed the smallest relationship between populism and expert acceptance. In fact, we only see a significant relationship between populism and (lower) acceptance of birth advice in the Netherlands. We were interested in whether populist sentiment was most activated for political topics, and the birth vignette is the least political of all, which could indicate that populism is not strongly or consistently opposed to accepting expert advice on non-politicized topics. Although statistically insignificant, in the US and Denmark, higher scores for populism were associated with greater acceptance of the birth advice. We see some consistent differences between countries too. Both the UK and US had no significant associations between populism and advice acceptance. This may reflect idiosyncrasies inherent in the sample. That said, it is unclear why we would see exact these

country differences. Because of these divergences, we interpret Figure 2 as showing a general tendency for populism to be associated with less acceptance of expert advice, but with a large degree of variation depending on both country and topic. In many instances, populists will be nearly as accepting of expert advice as non-populists, while in others populism is strongly associated with lower levels of acceptance.[4]

### 6.*2 Does populism interact with the presence of an additional expert source?*

We hypothesized that acceptance of advice is higher when supported with an additional, expert source compared to no additional expert source **(H2).** However, we did not find support for this ($B = 0.02, p < 0.28$) . We did find support for our third hypothesis, that acceptance of advice is higher if that additional expert source is independent, rather than affiliated with the government **(H3).** With the control (no extra expert source given) as the reference category, we found no statistically significant increase in acceptance with a government source ($B = -0.008, p < 0.73$), but we found slightly greater acceptance when the source was independent ($B = 0.05, p < 0.03$). Despite statistical significance, the effect size is small.[5] We devote more space in the discussion to consider what these findings indicate.

We predicted that populism would moderate the above relationships – that acceptance levels among those scoring higher in populism would be less impacted by an expert source **(H4)** ($B = -0.15, p < 0.23$) and that the independence of an expert source would have a greater impact on acceptance levels among those scoring higher in populism **(H5)** (*Government source:* $B = -0.15, p < 0.31$; *Independent source:* $B = -0.16, p < 0.28$) . In both cases, the interactions were insignificant and the hypotheses thus not supported. Given the weak effect of the treatment, that these interactions are insignificant is not unexpected.

[4] The measure of populism we use (Castanho Silva et al., 2018) is a composite measure that can be disaggregated into three facets: anti-elitism, people-centrism, and a Manichean outlook. In the appendix we display additional analyses where we examine and discuss the relationships between these facets and advice acceptance.

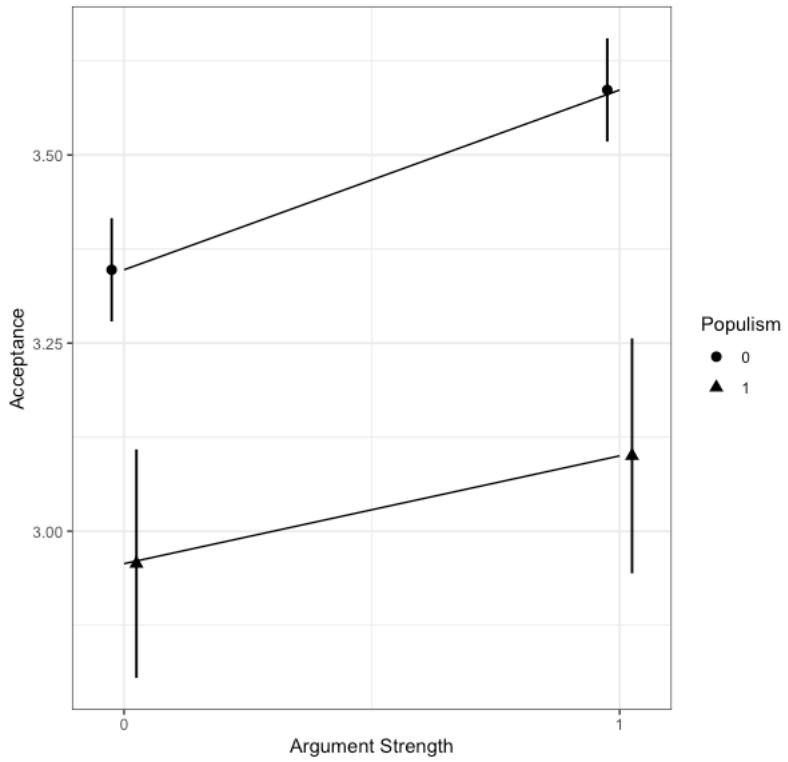
[5] The language for the independent treatments differed, with some specifically using the word independent. Therefore, we chose to test whether this effect was driven by particular cases. We found that the independent treatment was significant only in those cases where the word was used. However, those two cases were also the two political ones – therefore we cannot be certain if it is due to the language or the topic.

### *6.3 Does populism interact with argument quality?*

We found strong evidence that advice acceptance is higher when it's supported with a strong (vs. weak) argument **(H6a)** (*B = 0.22, p < 2e-16*). Similarly, the quality of the argument also impacted how the respondents said they would adjust future trust levels towards the expert authorities behind the advice **(H6b)** (*B = 0.24, p < 2e-16*).

Are these two relationships moderated by levels of populism **(H7a,b)**? Here we found no support for our hypotheses (*Acceptance: B = -0.10, p < 0.43; Future trust: B = -0.08, p < 0.39*). Figure 3 shows the relationship between populism, argument quality, and advice acceptance. We see clearly that the effect of improved argument quality is nearly identical among people at both the highest and lowest levels of populism. While we argued that populists would be relatively more swayed by argument quality, as they are less moved by expertise, we do see, at least, that they are *as* swayed by argument quality. Although they are at a lower baseline of trust, a stronger quality argument will lead to about as much greater acceptance as would be the case for people with less populist attitudes.

**Figure 3:** Populism and argument quality




Notes: Predicted values based on hierarchical linear model. Showing predicted values for those scoring the highest (represented by a triangle) and lowest (represented by a dot) on the populism scale.

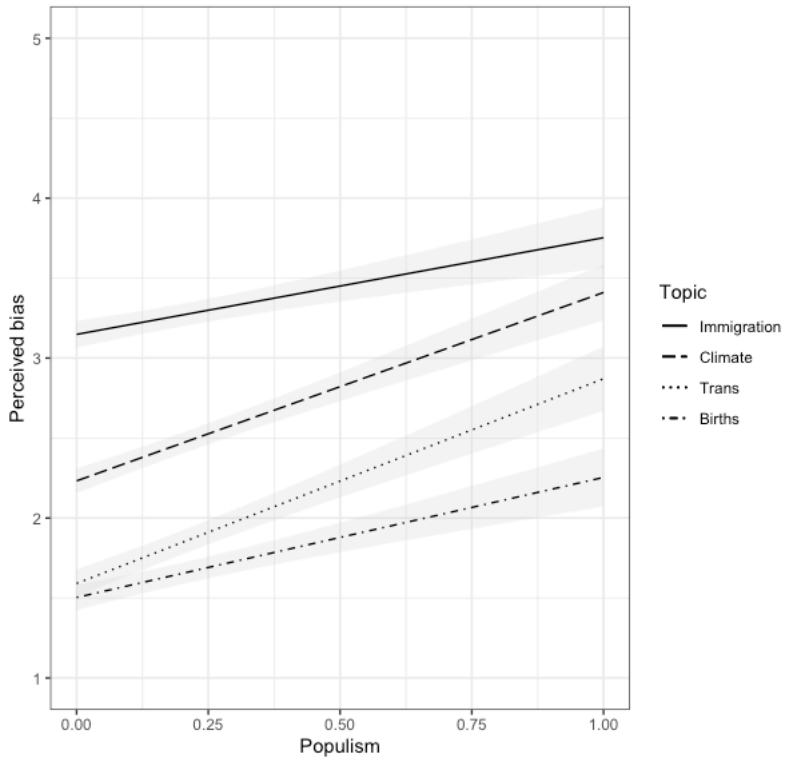
### *6.4 Possible explanations for these results*

The above results are in some respects contradictory. While populism is associated with lower levels of trust and less acceptance of advice, populists are equally impacted by the strength of the argument and an additional expert source.

To understand this dynamic, we explored whether populism is associated with whether respondents assessed the vignettes as politically biased and/or well-reasoned. We found that populism impacted both these assessments. Populists were more likely to perceive political bias in the vignettes ($B = 0.95$, $p < 2e\text{-}16$), and were also more critical of the argument quality ($B = -0.40$, $p < 1.54e\text{-}09$) and the associations with populism were larger than associations with any demographic covariate. By having a mix of topics, some more political and politicized than others, we can assess how populism is associated with perceived bias across these domains. As can be seen in in Figure 4, in all four cases, we see a significant association between populism

and perceived bias, with varying effect sizes, and significantly different baseline perceptions of bias.

**Figure 4:** Populism and perceived bias




Notes: Predicted values based on OLS models. Populism scale has been min-max transformed, to run from the lowest value in the sample to the highest. Perceived bias runs from 1 "not at all" to 5 "completely", and with the midpoint "moderately".

These results provide a potential explanation for the above findings. It may seem strange that populists and non-populists have different levels of trust and acceptance if they respond equally to the strength of arguments, yet that would be misleading. Populists appear equally moved by *increases* in argument quality, but are more critical of the arguments they are given and more suspicious that these arguments (or the ones giving them) are politically biased. Their standards appear higher. This could represent a dispositional difference, or it could be the result of existing levels of trust and cynicism.

## 7. Discussion and conclusion

Populists appear to have low trust in expert institutions, while at the same time they express rather technocratic views. This makes it important to understand how they ended up with these apparently conflicting perspectives, and how they would respond when faced with expert advice. Our approach suggests that how people act in these situations is both distinct from and more relevant than responses to general trust items. We tested how populists would respond to expert advice in a broad range of situations. These situations included medical situations, where one would traditionally accept expert advice, as well as political choices, where individuals are expected to be more critical. While we found consistent relationships between populism and reluctance to accept the advice for the pooled regressions, we also found substantial variation among cases and countries.

Our findings, displayed in Table 3, indicate that populism generally does influence acceptance of expert advice, but populists demonstrate quite 'normal' responses to both expert sources and to good quality arguments, similar to how non-populists and more pro-elite individuals would do. Both groups were similarly moved by additional expert sources – not very much, and primarily from independent ones. And both groups were equally influenced by reading a good quality argument. As individuals are driven by accuracy goals (Mercier, 2020), we predicted populist individuals would put extra weight on the quality of the argument, as they would discount its source. However, that was not found. That they respond similarly, however, accords with recent research showing that people across the political spectrum are similarly moved by arguments and evidence (Coppock, 2023).

**Table 3:** Overview of hypotheses and findings (abbreviated)

| **Hypotheses** | **Findings** |
|---|---|
| H1: Populism associated with less acceptance of expert advice | Supported |
| H2: Advice acceptance higher when supported with extra expert source | Not supported |
| H3: Advice acceptance higher if extra expert source is independent | Partially supported |
| H4: The impact of an expert source moderated by populism | Not supported |
| H5: The independence of an expert source moderated by populism | Not supported |
| H6a: Acceptance of advice higher when supported with a strong argument | Supported |
| H6b: Future trust levels towards expert authorities higher with strong argument | Supported |
| H7a: Impact of argument strength on advice acceptance moderated by populism | Not supported |
| H7b: Impact of argument strength on future trust levels moderated by populism | Not supported |

Although it is reassuring that people along the populist spectrum appear to respond to both argument quality and expert sources, it may appear somewhat paradoxical. If people generally respond similarly, why do their views not converge? Are populists even different from non-populist voters if they respond in such a 'normal' fashion to the various facets of expertise? One possibility may be they have been presented with different arguments throughout their lives. Additionally, as can be seen here, although populists and non-populists responded equally to changes in argument quality, populists perceived the arguments as weaker and more politically biased. This could serve to reinforce the gap between the two groups, even if the groups respond in parallel ways to expertise.

While it may make sense intuitively that people could be equally swayed by good arguments, it is harder to make sense of their similar response to the expert sources given that the latter are typically from elites. As our populist respondents were more skeptical towards expert authorities, it makes little sense that they would react the same way to an expert source. We therefore view those results with some degree of skepticism. Our source treatment did not show a strong impact on our participants in general, yet we do not believe that individuals truly ignore sources. It may be that in vignette research like this, people do not factor in these sources very heavily, even if they would in the real world. It may also be that people have specific sources they trust and would not be swayed by a generic one. A stronger treatment, or a more realistic one, could potentially demonstrate differences between populists and non-populists.

Importantly, we argue that populist individuals are not necessarily against expert institutions, but they are skeptical about those institutions being truly independent and are more critical towards argument quality. This would be in line with Bertsou and Caramani (2022, pp. 6) who find that "... in practice populist attitudes go hand in hand with a preference for expertise in politics." Perhaps populists have high ideals for the role of experts in society, but feel let down. That populists perceive greater levels of political bias could indicate they are inherently more sensitive to signs of political bias or that this perception emerges as an effect of higher levels of distrust. As our results indicate that populism does not equate to a wholesale rejection of expertise nor of arguments provided by experts, we would stress that expert institutions should explain their reasoning and evidence when giving advice to the public rather than perceiving populists to be a lost cause. Explanations such as these may serve to increase trust in expert institutions as well as to improve advice acceptance among those who are more skeptical.

It is worth noting that the relationship between populism and advice acceptance varies between regions, and is insignificant in the UK and US. We cannot explain exactly why we find this variation, however we would note that some degree of variation should be expected. Perceptions of issues and expert stances on those issues are not uniform between individuals across countries. Naturally this should result in some degree of variation in the relationships found.

Future research should also investigate the reasons for populist distrust in more depth. If populists actually want expertise to play a role in politics and policy but they still distrust experts, this tension deserves to be explored in greater depth. Does distrust emerge from something innate – a kind of personality trait – or can anyone with technocratic ideals become jaded and populist if they feel deceived or disappointed by experts and expert institutions in their country? In the latter case, there may be lessons here for how expert institutions can improve their public communication. If power is given to non-elected expert institutions, those institutions should feel the weight of responsibility to ensure their advice is well-grounded – and when the evidence is not so firm, to be honest about their lack of certainty or the potential risks or tradeoffs. Previous work on expert communication about COVID-19 vaccines found that while transparency about the negative aspects of vaccines may lead to less vaccine uptake, it also leads to greater levels of trust in health authorities (Author, 2021b). While there is the temptation for authorities to try to nudge the public towards the *right* decisions, this may risk long-term negative consequences in the form of lower trust levels in these expert authorities. The increases we appear to be seeing in populism and distrust of expert authorities cannot solely be tackled by trying to secure disgruntled compliance from populists. The relative 'normality' of populism demonstrated in this article may serve as encouragement for experts to provide better quality arguments, which may lead populists to listen to expertise, even if they approach it with a larger dose of skepticism.

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# APPENDIX

**Sections**

# A1: Background information

**A1.1** VIGNETTE TEXTS

*Climate Change*

Increase + Stronger

**Now please imagine the following situation**

Faced with the severe consequences of climate change, a new proposal is put forward that aims to reduce climate change by making significant changes to agriculture and food production.

**Proposal:**

The proposal suggests that increasing the amount of organic farming could make a real difference in terms of stopping climate change. The proposal involves a plan in which conventional farming initiatives are cut, and instead, support is given to organic farmers to expand the production of organic food.

**Why?**

The proposal argues that because organic farming is less energy intensive and more sustainable, it does not have the same detrimental impact on ecosystems as conventional farming does. Research also indicates that organic farming methods result in significantly greater carbon sequestration in the soil, thereby preventing much carbon from being emitted into the atmosphere. As a result, the plan argues we can greatly reduce the negative impact of food production on the climate by increasing the use of organic farming.

Increase + Weaker

**Now please imagine the following situation**

Faced with the severe consequences of climate change, a new proposal is put forward that aims to reduce climate change by making significant changes to agriculture and food production.

**Proposal:**

The proposal suggests that increasing the amount of organic farming could make a real difference in terms of stopping climate change. The proposal involves a plan in which conventional farming initiatives are cut, and instead, support is given to organic farmers to expand the production of organic food.

**Why?**

The proposal argues that organic farming is natural and therefore good for the environment. Lots of people currently believe increasing organic farming is a good idea. There's not much conclusive research, but according to the scientists, it's a reasonable assumption based on their understandings. As a result, the plan argues that we can greatly reduce the negative impact of food production on the climate by increasing the use of organic farming.

Decrease + Stronger

**Now please imagine the following situation**

Faced with the severe consequences of climate change, a new proposal is put forward that aims to reduce climate change by making significant changes to agriculture and food

production.

**Proposal:**
The proposal suggests that reducing the amount of organic farming could make a real difference in terms of stopping climate change. The proposal involves a plan in which support towards organic initiatives is cut, and instead, support is given to farmers to purchase modern fertilizers and pesticides.

**Why?**
The proposal argues that because modern farming methods are much more efficient, they do not have the same detrimental impact on ecosystems as organic farming does. Recent research demonstrates that because organic farming is far less effective in how much food can be produced per square mile, it results in deforestation and considerably increased carbon emissions. As a result, the plan argues we can significantly reduce the carbon footprint of food production by cutting the use of organic farming and using more technologically advanced farming methods.

Decrease + Weaker
**Now please imagine the following situation**
Faced with the severe consequences of climate change, a new proposal is put forward that aims to reduce climate change by making significant changes to agriculture and food production.

**Proposal:**
The proposal suggests that reducing the amount of organic farming could make a real difference in terms of stopping climate change. The proposal involves a plan in which support towards organic initiatives is cut, and instead, support is given to farmers to purchase modern fertilizers and pesticides.

**Why?**
The proposal argues that although organic farming is natural, it is worse for the environment. Lots of people currently believe reducing organic farming is a good idea. There's not much conclusive research, but according to the scientists, it's a reasonable belief based on their understandings. As a result, the plan argues that we can greatly reduce the negative impact of food production on the climate by cutting the use of organic farming.

Government source
This proposal has been developed by climate researchers working for the Environmental Protection Agency (EPA).

The EPA strongly recommends this plan, which it believes can have a significant impact on reducing climate change, but leaves it for the voters to decide.

Independent source
This proposal has been developed by leading, independent climate researchers from Massachusetts Institute of Technology (MIT).

The climate researchers strongly recommend this plan, which they believe can have a significant impact on reducing climate change, but leave it for the voters to decide.

Control
The authors of the proposal strongly recommend this plan, which they believe can have a significant impact on reducing climate change, but leave it for the voters to decide.

*Trans treatment*

Hormones + Stronger
**Now please imagine the following situation**
After being unhappy for a number of months, your 11 year old son tells you that he is transgender and would like to live life as a girl. You discuss this with a team of doctors who specialize in gender-based issues.

**Advice:**
They affirm his new identity and recommend that he begin hormone treatments to postpone puberty.

**Why?**
The doctors tell you that it is essential they do this, because if he were to go through male puberty, the possibility of a full transition and passing as a woman would become much more limited. The better he can live life as a woman, the better his future mental health is likely to be. Recent research indicates, for instance, that trans youth who undergo such treatments have significantly lower rates of suicidal thoughts. Therefore, the best approach for your son is to begin treatment before puberty begins.

Hormones + Weaker
**Now please imagine the following situation**
After being unhappy for a number of months, your 11 year old son tells you that he is transgender and would like to live life as a girl. You discuss this with a team of doctors who specialize in gender-based issues.

**Advice:**
They affirm his new identity and recommend that he begin hormone treatments to postpone puberty.

**Why?**
The doctors tell you this is what should be done. They believe doing otherwise could be bad for his future. If he says that he is a woman, we have to take him at his word and begin treatment. There's very limited long-term research on this, but this is what lots of doctors, medical establishments, and clinics are doing nowadays. Therefore, the best approach for your son is to begin treatment before puberty begins.

Therapy + Stronger
After being unhappy for a number of months, your 11 year old son tells you that he is transgender and would like to live life as a girl. You discuss this with a team of doctors who specialize in gender-based issues.

**Advice:**

The doctors tell you that before undergoing any medical intervention, they recommend therapeutic counselling.

**Why?**
The doctors tell you that many children can become confused about their gender. However, this is often temporary. Recent research indicates that if a trans identity were affirmed now, it may make these feelings more long-lasting, leading to more depression. Additionally, any sort of medical intervention, such as blocking puberty, carries risks. In this case, risks that we don't fully understand yet. Therefore, the best approach for your son is to get him counselling.

Therapy + Weaker
**Now please imagine the following situation**
After being unhappy for a number of months, your 11 year old son tells you that he is transgender and would like to live life as a girl. You discuss this with a team of doctors who specialize in gender-based issues.

**Advice:**
The doctors tell you that before undergoing any medical intervention, they recommend therapeutic counselling.

**Why?**
The doctors tell you this is what should be done. They believe doing otherwise could be bad for his future. Although he says that he is a woman, he could be confused. There's very limited long-term research on this, but this is what lots of doctors, medical establishments, and clinics are doing nowadays. Therefore, the best approach for your son is to get him counselling.

Government
The doctors tell you that they are following guidelines developed by researchers at the National Institutes of Health (NIH).

The NIH promotes this approach, and the doctors tell you this is what they recommend, but the decision is left with you.

Independent
The doctors tell you that they are following guidelines developed by medical specialists in gender related issues at Harvard Medical School.

The gender specialists promote this approach, and the doctors tell you this is what they recommend, but the decision is left with you.

Control
The doctors tell you this is what they recommend, but the decision is left with you.

*Immigration*

Increase + Stronger

**Now please imagine the following situation**
Due to consistent economic challenges in your country, immigration has been identified as an important issue to address. A proposal has been made to change the immigration laws, with the goal of improving the economy.

**Proposal:**
The proposal is that we significantly increase the number of labor migrants allowed into the country.

**Why?**
The proposal argues that increasing the amount of labor migrants in the country will serve two important functions for the economy. First, the new immigrants will do many jobs which locals either can't or won't do. Research indicates that allowing more people to immigrate for work results in a more dynamic economy with higher levels of economic growth due to immigrants filling gaps in the labor market. Second, as we have an ageing population, we have a strong need for more young people and workers, both to serve as carers for the elderly, but also to support social services through taxes. Given these two reasons, immigration can result in strong economic gains for the country.

Increase + Weaker
**Now please imagine the following situation**
Due to consistent economic challenges in your country, immigration has been identified as an important issue to address. A proposal has been made to change the immigration laws, with the goal of improving the economy.

**Proposal:**
The proposal is that we significantly increase the number of labor migrants allowed into the country.

**Why?**
This proposal argues that increasing the amount of labor migrants in the country will support the economy. There are many reasons behind this. The proposal argues that increasing labor migration can improve the economy in many different ways - from improving the labor market to increasing economic growth. It is quite difficult for carefully designed research studies to measure these improvements, however, the proposal claims that, based on their knowledge of how the economy works, most economists believe that there are large improvements to be had by increasing labor migration into the country.

Decrease + Stronger
**Now please imagine the following situation**
Due to consistent economic challenges in your country, immigration has been identified as an important issue to address. A proposal has been made to change the immigration laws, with the goal of improving the economy.

**Proposal:**
The proposal is that we significantly cut down on the number of labor migrants allowed into the country.

**Why?**
The proposal argues that decreasing the amount of labor migrants in the country will serve

two important functions for the economy. First, immigrants from poorer countries tend to displace local workers. These immigrants do jobs at wages locals won't accept. By cutting the number of immigrants, we can gradually bring up wages which will support local workers, and since they won't be sending their income out of the country, this will improve the economy overall. Second, as many of these migrants work in a low-skill capacity, recent research indicates that their social service usage exceeds the amount of taxes they pay. This therefore has a net negative effect on the national budget. Given these two reasons, reducing labor immigration can result in strong economic gains for the country.

Decrease + Weaker

**Now please imagine the following situation**

Due to consistent economic challenges in your country, immigration has been identified as an important issue to address. A proposal has been made to change the immigration laws, with the goal of improving the economy.

**Proposal:**

The proposal is that we significantly cut down on the number of labor migrants allowed into the country.

**Why?**

This proposal argues that decreasing the amount of labor migrants in the country will support the economy. There are many reasons behind this. The proposal argues that decreasing labor migration can improve the economy in many different ways - from improving the labor market to increasing economic growth. It is quite difficult for carefully designed research studies to measure these improvements, however, the proposal claims that, based on their knowledge of how the economy works, most economists believe that there are large improvements to be had by decreasing labor migration into the country.

Government

This proposal has been developed by experts working for the US Treasury.

The Treasury strongly recommends this plan, which it believes can have a significant impact on the national economy, but leaves it for the voters to decide.

Independent

This proposal has been developed by leading, independent labor market researchers at the University of Pennsylvania.

The researchers strongly recommend this plan, which they believe can have a significant impact on the national economy, but leave it for the voters to decide.

Control

The authors of the proposal strongly recommend this plan, which they believe can have a significant impact on the national economy, but leave it for the voters to decide.

*Birth Options*

Home + Stronger

**Now please imagine the following situation**
You and your partner are expecting your first child. It is a low-risk pregnancy, and you go to see your doctor to discuss the possibility of giving birth at home rather than at the local hospital.

**Advice:**
The doctor recommends a home birth.

**Why?**
For low-risk pregnancies, research has demonstrated significant improvements to the well-being of both mother and newborn when childbirth takes place within the quiet, natural surroundings of the home rather than at a busy hospital. This comfortable environment can make the complications of childbirth less likely to occur. The doctor also assures you that many medical interventions can be safely carried out by trained midwives, and that in case there is an emergency, you can be quickly taken to the local hospital, where they will be ready to help you. With all this in mind, the doctor suggests you should plan for a home birth and not a hospital birth.

Home + Weaker
**Now please imagine the following situation**
You and your partner are expecting your first child. It is a low-risk pregnancy, and you go to see your doctor to discuss the possibility of giving birth at home rather than at the local hospital.

**Advice:**
The doctor recommends a home birth.

**Why?**
For low-risk pregnancies, giving birth at home usually goes fine. It's generally a lot nicer to give birth at home. The research is unclear if it's safer or riskier, but more and more women are choosing to give birth at home. As a result, more and more doctors recommend it. Most of the women seem happy with their decision. It's reasonable to believe you would be happy with the decision too. With all this in mind, the doctor suggests you should plan for a home birth and not a hospital birth.

Hospital + Stronger
**Now please imagine the following situation**
You and your partner are expecting your first child. It is a low-risk pregnancy, and you go to see your doctor to discuss the possibility of giving birth at home rather than at the local hospital.

**Advice:**
The doctor recommends giving birth at the local hospital.

**Why?**
The doctor makes this recommendation because home births may involve some risk to both mother and newborn. Even if your pregnancy is considered low-risk, no pregnancy is truly risk free. The hospital provides the best options for specialized medical care in the event of unforeseen complications at birth. Childbirth has become dramatically safer for both baby and mother, but that is largely due to medical interventions which may be needed in

emergencies. Being at the hospital can save crucial time. A meta-analysis in a top medical journal concluded that home births were two to three times more likely to result in neonatal death than a planned hospital birth. With all this in mind, the doctor suggests you should plan for a hospital birth and not a home birth.

Hospital + Weaker

**Now please imagine the following situation**

You and your partner are expecting your first child. It is a low-risk pregnancy, and you go to see your doctor to discuss the possibility of giving birth at home rather than at the local hospital.

**Advice:**

The doctor recommends giving birth at the local hospital.

**Why?**

The doctor makes this recommendation because this is what most women choose to do, and most doctors recommend it, so your doctor thinks it's probably the best option for you too. Although it's usually a lot nicer to give birth at home, the hospital is the more common place to give birth. The research is unclear if it's safer or riskier to give birth at the hospital, but it's what's traditionally done. Most women seem happy with their decision. It's reasonable to believe you would be happy with the decision too. With all this in mind, the doctor suggests you should plan for a hospital birth and not a home birth.

Government

The doctor tells you that they are following guidelines developed by researchers at the National Institutes of Health (NIH).

The NIH promotes this approach, and the doctor tells you this is what they recommend, but the decision is left with you.

Independent

The doctor tells you that they are following guidelines developed by leading birth specialists at Johns Hopkins Medical School.

The specialists promote this approach, and the doctor tells you this is what they recommend, but the decision is left with you.

Control

The doctor tells you this is what they recommend, but the decision is left with you.

**A1.2** Reactor Quotas – target and achieved *(rounded and for the full samples)*

| **CZ** | **Achieved** |
|---|---|
| **Age:** | |
| - 18-24: 8.68% | 9% |
| - 25-34 17.61% | 18% |
| - 35-44 21.72% | 22% |
| - 45-54 19.11% | 18% |
| - 55+ 32.88% | 33% |
| **Gender:** | |
| - Female 50.07% | 50% |
| - Male 49.93% | 50% |
| **Region:** | |
| - Prague (Praha) 12.29% | 12% |
| - Central Bohemia (Střední Čechy) 12.86% | 13% |
| - Southwest (Jihozápad) 11.52% | 12% |
| - Northwest (Severozápad) 10.48% | 11% |
| - Severovychod 14.21% | 14% |
| - Jihovychod 15.93% | 15% |
| - Stredni Morava 11.41% | 11% |
| - Moravskozlezsco 11.30% | 11% |
| **Education:** | |
| - ISCED 0-2 9.35% | 5% |
| - ISCED 3-4 69.83% | 73% |
| - ISCED 5-8 20.82% | 21% |

**Note on education classification:**
- Základní – ISCED 0-2
- Střední vzdělání bez maturity / s vyučením - ISCED 3-4
- Střední s maturitou - ISCED 3-4
- Vyšší odborné - ISCED 5-8
- Vysokoškolské - ISCED 5-8
- Postgraduální - ISCED 5-8

| DK | Achieved |
|---|---|
| **Age:** | |
| - 18-24 12.01% | 14% |
| - 25-34 18.13% | 20% |
| - 35-44 16.89% | 16% |
| - 45-54 19.54% | 16% |
| - 55+ 33.42% | 34% |
| **Gender:** | |
| - Female 49.89% | 48% |
| - Male 50.11% | 51% |
| **Region:** | |
| - Hovedstaden 31.61% | 26% |
| - Sjælland 14.41% | 15% |
| - Southern Denmark 21.07% | 23% |
| - Midtjylland 22.75% | 25% |
| - Nordjylland 10.16% | 11% |
| **Education:** | |
| - ISCED 0-2 22.74% | 16% |
| - ISCED 3-4 43.37% | 41% |
| - ISCED 5-8 33.89% | 41% |

**Note on education classification:**
- Folkeskole - ISCED 0-2
- Gymnasial uddannelse eller erhvervsskole - ISCED 3-4
- Kort eller mellemlang videregående uddannelse - ISCED 5-8
- Lang videregående uddannelse - ISCED 5-8
- Ph.d.-grad - ISCED 5-8

| NL | Achieved |
|---|---|
| **Age:** | |
| - 18-24: 11.95% | 13% |
| - 25-34: 17.10% | 20% |
| - 35-44: 17.16% | 16% |
| - 45-54: 20.89% | 19% |
| - 55+: 32.91% | 32% |
| **Gender:** | |
| - Female: 50.07% | 55% |
| - Male: 49.93% | 44% |
| **Region:** | |
| - Northern Netherlands: 10.12% | 12% |
| - Eastern Netherlands: 21.11% | 24% |
| - Western Netherlands: 47.48% | 41% |
| - Southern Netherlands: 21.29% | 24% |
| **Education:** | |
| - ISCED 0-2: 27.14% | 7% |
| - ISCED 3-4: 41.60% | 58% |
| - ISCED 5-8: 31.25% | 35% |

**Note on education classification:**
- Basisonderwijs - ISCED 0-2
- Middelbare school (lager secundair onderwijs - leeftijd 12 tot 15 jaar) - ISCED 0-2
- Middelbare school (hoger secundair onderwijs - leeftijd 15 tot 18 jaar) - ISCED 3-4
- Middelbaar beroepsonderwijs (MBO) - ISCED 3-4
- Bachelor (HBO/WO) - ISCED 5-8
- Master (HBO/WO) of hoger - ISCED 5-8

| UK | Achieved |
|---|---|
| **Age:** | |
| - 18-24: 11.38% | 12% |
| - 25-34: 19.32% | 20% |
| - 35-44: 18.05% | 18% |
| - 45-54: 19.41% | 18% |
| - 55+: 31.84% | 32% |
| **Gender:** | |
| - Female: 50.52% | 52% |
| - Male: 49.48% | 48% |
| **Region (NUTS1 Condensed):** | |
| - Northern England: 23.17% | 24% |
| - Mid England: 25.44% | 25% |
| - Southern England: 22.20% | 22% |
| - Greater London: 13.480% | 13% |
| - Wales: 4.710% | 5% |
| - Scotland: 8.180% | 9% |
| - Northern Ireland: 2.810% | 3% |
| **Education:** | |
| - ISCED 0-2: 19.365% | 1% |
| - ISCED 3-4: 39.538% | 55% |
| - ISCED 5-8: 41.097% | 44% |

**Note on education classification:**
- Primary school - ISCED 0-2
- Secondary school up to 16 years - ISCED 3-4
- Secondary or further education (A-levels, BTEC, etc.) - ISCED 3-4
- College or university (higher education) - ISCED 5-8
- Post-graduate degree - ISCED 5-8

**Note on region:**
- Northern England: (North West, North East, Yorkshire and the Humber)
- Mid England: (West Midlands, East Midlands and East of England)
- Southern England: (South West and South East)

**USA**

| **Age:** | **Achieved** |
|---|---|
| - 18-24: 13% | 13% |
| - 25-34: 19% | 20% |
| - 35-44: 18% | 19% |
| - 45-54: 19% | 18% |
| - 55+: 31% | 31% |
| | |
| **Gender:** | |
| - Female: 51% | 51% |
| - Male: 49% | 49% |
| | |
| **Region (NUTS 1):** | |
| - Midwest: 21% | 21% |
| - Northeast: 18% | 19% |
| - South: 37% | 37% |
| - West: 23% | 23% |
| | |
| **Education:** | |
| - Less than HS: 10% | 6% |
| - HS: 29% | 33% |
| - Some College/Associate Degree: 26% | 26% |
| - Bachelors: 21% | 21% |
| - Advanced Degree: 13% | 13% |

**Note on education classification:**
- Less than high school - Less than HS
- High school graduate - HS
- Some college - Some College/Associate Degree
- 2 year degree - Some College/Associate Degree
- 4 year degree - Bachelors
- Master's degree – Advanced Degree
- Professional degree - Advanced Degree
- Doctorate - Advanced Degree

### A1.3 Divergences from pre-registration

In this section we will describe divergences from the pre-registration. In the following section, A2, we reproduce the regression tables for the major analyses in the main text of the paper. In A3 we report the analyses as pre-registered.

First, we focused the statistical analyses on those who passed the comprehension check question. We specified in the pre-registration we may use that question (and other tools) to exclude poor respondents - however we did not specify exactly what we would do. Furthermore, we indicated in the pre-registration that we would report analyses for the full sample, which we are doing in A3.

Second, we changed the numbering/ordering of the hypotheses and excluded one pre-registered hypothesis from the paper text: "*There is an interaction between expert source and argument quality. In other words, the importance of argument quality increases if there is no additional expert source, and the importance of the expert source increases if the argument is poor.*" This hypothesis was not supported, with the regression table reported in A3.

Finally, we included additional analyses which were not pre-registered, or which were reported as additional analyses (for which there were no hypotheses) in the "Other" section of the pre-registration. In the latter case, this includes disaggregating by country and testing if the main relationship between populism and acceptance is driven or strongly impacted by ideology or party. In the former case, the exploratory analyses reported at the end of the results section - if populism predicts perception of political bias or subjective judgment of argument quality - were not indicated in the pre-registration.

# A2 Regression tables for main results in paper

**Table A2.1:** Populism and acceptance

| | |
|---|---|
| Populism | -0.44*** |
| | (0.07) |
| Age | -0.23*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.14** |
| | (0.05) |
| Urban | 0.06** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10** |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.08* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Constant | 3.49*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -34,444.84 |
| Akaike Inf. Crit. | 68,921.68 |
| Bayesian Inf. Crit. | 69,048.54 |

*Note:* $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

**Table A2.2**: Populism and acceptance: robust to party and ideology

| | CZ | DK | NL | UK | US |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Populism | -0.56*** | -0.14 | -0.70*** | -0.25 | 0.001 |
| | (0.14) | (0.18) | (0.15) | (0.14) | (0.15) |
| Ideology | -0.40** | -0.28* | -0.39** | -0.38** | -0.35** |
| | (0.14) | (0.12) | (0.14) | (0.12) | (0.12) |
| Česká strana sociálně demokratická | 0.27* | | | | |
| | (0.11) | | | | |
| Jiné (uveďte jaké) | -0.11 | | | | |
| | (0.11) | | | | |
| Komunistická strana Čech a Moravy | -0.35* | | | | |
| | (0.14) | | | | |
| Nevím | 0.02 | | | | |
| | (0.07) | | | | |
| Nevolil/a bych | -0.16* | | | | |
| | (0.08) | | | | |
| Piráti a Starostové | 0.14 | | | | |
| | (0.08) | | | | |
| Andere (gelieve te specificeren) | | | 0.07 | | |
| | | | (0.23) | | |
| BIJ1 | | | -0.31 | | |
| | | | (0.29) | | |
| BoerBurgerBeweging | | | 0.11 | | |
| | | | (0.21) | | |
| CDA | | | -0.20 | | |
| | | | (0.23) | | |
| ChristenUnie | | | 0.09 | | |
| | | | (0.23) | | |
| D66 | | | 0.19 | | |
| | | | (0.21) | | |

| | | | | | |
|---|---|---|---|---|---|
| DENK | | | -0.09 | | |
| | | | (0.26) | | |
| Forum voor Democratie | | | -0.51* | | |
| | | | (0.22) | | |
| GroenLinks | | | -0.03 | | |
| | | | (0.21) | | |
| Ik zou niet stemmen | | | -0.33 | | |
| | | | (0.20) | | |
| JA21 | | | -0.01 | | |
| | | | (0.22) | | |
| Partij voor de Dieren | | | 0.04 | | |
| | | | (0.20) | | |
| Don't know | | | | 0.03 | |
| | | | | (0.07) | |
| Green Party | | | | 0.07 | |
| | | | | (0.11) | |
| Labour Party | | | | 0.07 | |
| | | | | (0.06) | |
| Liberal Democrats | | | | 0.01 | |
| | | | | (0.09) | |
| Independent | | | | | -0.20*** |
| | | | | | (0.06) |
| Other (please specify) | | | | 0.12 | -0.34* |
| | | | | (0.14) | (0.14) |
| Plaid Cymru | | | | 0.30 | |
| | | | | (0.23) | |
| Prefer not to say | 0.18 | | -0.04 | -0.17 | -0.42* |
| | (0.15) | | (0.27) | (0.21) | (0.20) |
| Přísaha – občanské hnutí Roberta Šlachty | 0.02 | | | | |
| | (0.13) | | | | |
| SPOLU | 0.11 | | | | |
| | (0.07) | | | | |
| Svoboda a přímá demokracie | -0.05 | | | | |
| | (0.07) | | | | |
| Dansk Folkeparti | | 0.30* | | | |
| | | (0.12) | | | |

| | | |
|---|---|---|
| Det Konservative Folkeparti | 0.14 | |
| | (0.10) | |
| Enhedslisten – De Rød-Grønne | 0.11 | |
| | (0.11) | |
| Foretrækker ikke at svare | 0.18 | |
| | (0.13) | |
| Liberal Alliance | 0.27* | |
| | (0.13) | |
| Nye Borgerlige | 0.26* | |
| | (0.10) | |
| Radikale Venstre | 0.33* | |
| | (0.13) | |
| SF- Socialistisk Folkeparti | 0.15 | |
| | (0.10) | |
| Socialdemokratiet | 0.23** | |
| | (0.09) | |
| Ved ikke | 0.09 | |
| | (0.09) | |
| Venstre, Danmarks Liberale Parti | 0.37*** | |
| | (0.11) | |
| Ville ikke stemme | -0.19 | |
| | (0.12) | |
| PvdA | | 0.11 |
| | | (0.21) |
| PVV | | -0.12 |
| | | (0.20) |
| SGP | | -0.41 |
| | | (0.24) |
| SP | | -0.06 |
| | | (0.20) |
| Volt | | 0.37 |
| | | (0.24) |
| VVD | | 0.15 |
| | | (0.20) |
| Weet ik niet | | 0.03 |
| | | (0.20) |

| | | | | | |
|---|---|---|---|---|---|
| Reform UK | | | | -0.08 | |
| | | | | (0.11) | |
| Scottish National Party | | | | -0.10 | |
| | | | | (0.12) | |
| Would not vote | | | | -0.10 | |
| | | | | (0.08) | |
| Republican | | | | | -0.41*** |
| | | | | | (0.06) |
| Age | -0.14 | -0.31*** | -0.23* | -0.11 | -0.25* |
| | (0.10) | (0.09) | (0.09) | (0.09) | (0.10) |
| Male | -0.004 | -0.01 | 0.04 | 0.06 | -0.02 |
| | (0.04) | (0.04) | (0.04) | (0.04) | (0.05) |
| University Education | -0.02 | -0.01 | -0.09* | -0.01 | 0.06 |
| | (0.05) | (0.04) | (0.05) | (0.04) | (0.06) |
| Income | -0.03 | 0.09 | 0.19 | 0.02 | 0.32*** |
| | (0.09) | (0.11) | (0.11) | (0.13) | (0.09) |
| Urban | 0.01 | 0.11** | 0.003 | 0.05 | 0.03 |
| | (0.04) | (0.04) | (0.04) | (0.04) | (0.05) |
| Topic: Climate Change | -0.14* | -0.33*** | -0.38*** | -0.10 | -0.24*** |
| | (0.06) | (0.06) | (0.06) | (0.05) | (0.07) |
| Topic: Immigration | -0.28*** | -0.44*** | -0.62*** | -0.39*** | -0.32*** |
| | (0.06) | (0.06) | (0.06) | (0.05) | (0.07) |
| Topic: Trans | 0.02 | 0.07 | -0.19*** | -0.13* | -0.31*** |
| | (0.06) | (0.06) | (0.06) | (0.05) | (0.07) |
| Constant | 3.67*** | 3.55*** | 3.97*** | 3.72*** | 3.80*** |
| | (0.11) | (0.11) | (0.21) | (0.11) | (0.10) |
| Observations | 4,176 | 4,308 | 4,072 | 4,428 | 3,528 |
| $R^2$ | 0.03 | 0.04 | 0.07 | 0.02 | 0.04 |
| Adjusted $R^2$ | 0.02 | 0.04 | 0.06 | 0.02 | 0.04 |
| Residual Std. Error | 1.27 (df = 4155) | 1.30 (df = 4285) | 1.25 (df = 4041) | 1.28 (df = 4407) | 1.38 (df = 3513) |
| F Statistic | 5.74*** (df = 20; 4155) | 8.22*** (df = 22; 4285) | 9.50*** (df = 30; 4041) | 4.60*** (df = 20; 4407) | 11.32*** (df = 14; 3513) |
| *Note:* | | | | | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.3:** Expert binary and acceptance

| | *Dependent variable:* |
|---|---|
| Expert Binary | 0.02 |
| | (0.02) |
| Age | -0.21*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.16** |
| | (0.05) |
| Urban | 0.05* |
| | (0.02) |
| DK | 0.17*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.07* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Constant | 3.36*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -34,464.38 |
| Akaike Inf. Crit. | 68,960.75 |
| Bayesian Inf. Crit. | 69,087.61 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.4:** Expert categorical and acceptance

| | |
|---|---|
| Government Source | -0.01 |
| | (0.02) |
| Independent Source | 0.05* |
| | (0.02) |
| Age | -0.21*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.16** |
| | (0.05) |
| Urban | 0.05* |
| | (0.02) |
| DK | 0.17*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.07* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Constant | 3.36*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -34,463.93 |
| Akaike Inf. Crit. | 68,961.86 |
| Bayesian Inf. Crit. | 69,096.65 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.5:** Expert binary and populism interaction

| | |
|---|---|
| Expert Binary | 0.05 |
| | (0.03) |
| Populism | -0.34** |
| | (0.11) |
| Age | -0.23*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.14** |
| | (0.05) |
| Urban | 0.06** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10** |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.08* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Expert Binary:Populism | -0.15 |
| | (0.13) |
| Constant | 3.45*** |
| | (0.05) |
| Observations | 20,512 |
| Log Likelihood | -34,447.75 |
| Akaike Inf. Crit. | 68,931.49 |

| | |
|---|---|
| Bayesian Inf. Crit. | 69,074.21 |
| *Note:* | $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$ |

**Table A2.6:** Expert categorical and populism interaction

| | |
|---|---|
| Government Source | 0.02 |
| | (0.04) |
| Independent Source | 0.08* |
| | (0.04) |
| Populism | -0.34** |
| | (0.11) |
| Age | -0.23*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.14** |
| | (0.05) |
| Urban | 0.06** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10** |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.08* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Government Source:Populism | -0.15 |

| | |
|---|---|
| | (0.15) |
| Independent Source:Populism | -0.16 |
| | (0.14) |
| Constant | 3.45*** |
| | (0.05) |
| Observations | 20,512 |
| Log Likelihood | -34,448.17 |
| Akaike Inf. Crit. | 68,936.35 |
| Bayesian Inf. Crit. | 69,094.92 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.7:** Argument quality and acceptance

| | |
|---|---|
| Argument Quality | 0.22*** |
| | (0.02) |
| Age | -0.21*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.15** |
| | (0.05) |
| Urban | 0.05* |
| | (0.02) |
| DK | 0.17*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.07* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |
| Topic: Immigration | -0.41*** |

| | |
|---|---|
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Constant | 3.27*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -34,389.16 |
| Akaike Inf. Crit. | 68,810.33 |
| Bayesian Inf. Crit. | 68,937.19 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.8:** Argument quality and future trust

| | |
|---|---|
| Argument Quality | 0.24*** |
| | (0.01) |
| Age | -0.22*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | -0.02 |
| | (0.02) |
| Income | 0.17*** |
| | (0.05) |
| Urban | 0.04 |
| | (0.02) |
| DK | 0.03 |
| | (0.03) |
| NL | 0.02 |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.11*** |
| | (0.03) |
| Topic: Climate Change | -0.18*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |

| | |
|---|---|
| | (0.02) |
| Topic: Trans | -0.13*** |
| | (0.02) |
| Constant | 3.05*** |
| | (0.03) |
| Observations | 20,512 |
| Log Likelihood | -29,406.14 |
| Akaike Inf. Crit. | 58,844.27 |
| Bayesian Inf. Crit. | 58,971.13 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.9:** Argument quality and populism interaction (acceptance DV)

| | |
|---|---|
| Populism | -0.39*** |
| | (0.09) |
| Argument Quality | 0.24*** |
| | (0.03) |
| Age | -0.23*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.13** |
| | (0.05) |
| Urban | 0.06** |
| | (0.02) |
| DK | 0.13*** |
| | (0.03) |
| NL | 0.10** |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.08* |
| | (0.03) |
| Topic: Climate Change | -0.24*** |
| | (0.02) |

| | |
|---|---|
| Topic: Immigration | -0.41*** |
| | (0.02) |
| Topic: Trans | -0.10*** |
| | (0.02) |
| Populism:Argument Quality | -0.10 |
| | (0.12) |
| Constant | 3.37*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -34,373.13 |
| Akaike Inf. Crit. | 68,782.26 |
| Bayesian Inf. Crit. | 68,924.98 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.10:** Argument quality and populism interaction (future trust DV)

| | |
|---|---|
| Populism | -0.41*** |
| | (0.08) |
| Argument Quality | 0.25*** |
| | (0.02) |
| Age | -0.24*** |
| | (0.04) |
| Male | 0.01 |
| | (0.02) |
| University Education | -0.03 |
| | (0.02) |
| Income | 0.16*** |
| | (0.05) |
| Urban | 0.04* |
| | (0.02) |
| DK | -0.02 |
| | (0.03) |
| NL | -0.003 |
| | (0.03) |
| UK | 0.19*** |
| | (0.03) |
| US | 0.11*** |

| | |
|---|---|
| | (0.03) |
| Topic: Climate Change | -0.18*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.13*** |
| | (0.02) |
| Populism:Argument Quality | -0.08 |
| | (0.09) |
| Constant | 3.16*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -29,384.39 |
| Akaike Inf. Crit. | 58,804.77 |
| Bayesian Inf. Crit. | 58,947.49 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.11:** Populism and perceived bias

| | |
|---|---|
| Populism | 0.95*** |
| | (0.07) |
| Male | -0.02 |
| | (0.02) |
| Urban | -0.05* |
| | (0.02) |
| Age | -0.002 |
| | (0.04) |
| Income | -0.01 |
| | (0.05) |
| University Education | 0.03 |
| | (0.02) |
| DK | 0.24*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | -0.23*** |
| | (0.03) |

| | |
|---|---|
| US | -0.07* |
| | (0.03) |
| Topic: Climate Change | 1.09*** |
| | (0.02) |
| Topic: Immigration | 1.60*** |
| | (0.02) |
| Topic: Trans | 0.25*** |
| | (0.02) |
| Constant | 1.64*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -31,313.91 |
| Akaike Inf. Crit. | 62,659.81 |
| Bayesian Inf. Crit. | 62,786.67 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A2.12:** Populism and subjective argument quality

| | |
|---|---|
| Populism | -0.40*** |
| | (0.07) |
| Age | -0.24*** |
| | (0.04) |
| Male | 0.02 |
| | (0.02) |
| University Education | -0.07** |
| | (0.02) |
| Income | 0.11* |
| | (0.05) |
| Urban | 0.06** |
| | (0.02) |
| DK | -0.02 |
| | (0.03) |
| NL | -0.11*** |
| | (0.03) |
| UK | 0.23*** |
| | (0.03) |
| US | 0.16*** |

| | |
|---|---|
| | (0.03) |
| Topic: Climate Change | -0.21*** |
| | (0.02) |
| Topic: Immigration | -0.35*** |
| | (0.02) |
| Topic: Trans | -0.12*** |
| | (0.02) |
| Argument Quality | 0.37*** |
| | (0.01) |
| Constant | 3.26*** |
| | (0.04) |
| Observations | 20,512 |
| Log Likelihood | -30,307.79 |
| Akaike Inf. Crit. | 60,649.59 |
| Bayesian Inf. Crit. | 60,784.38 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

# A3 Regression tables for preregistration analysis

**Table A3.1:** Populism and acceptance (Pre-reg H1**)**

| | |
|---|---|
| Populism | -0.41*** |
| | (0.06) |
| Age | -0.29*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.06** |
| | (0.02) |
| Income | 0.34*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Constant | 3.38*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -47,491.81 |
| Akaike Inf. Crit. | 95,015.62 |
| Bayesian Inf. Crit. | 95,148.02 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A3.2:** Expert binary and acceptance (Pre-reg H2)

| | |
|---|---|
| Expert Binary | 0.01 |
| | (0.02) |
| Age | -0.28*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.07** |
| | (0.02) |
| Income | 0.35*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.16*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.22*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Constant | 3.27*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -47,514.14 |
| Akaike Inf. Crit. | 95,060.27 |
| Bayesian Inf. Crit. | 95,192.68 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A3.3:** Expert categorical and acceptance (Pre-reg H3)

| | |
|---|---|
| Government Source | -0.01 |
| | (0.02) |
| Independent Source | 0.04* |
| | (0.02) |
| Age | -0.28*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.07** |
| | (0.02) |
| Income | 0.35*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.16*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.22*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Constant | 3.27*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -47,513.05 |
| Akaike Inf. Crit. | 95,060.09 |
| Bayesian Inf. Crit. | 95,200.77 |

*Note:* $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

**Table A3.4:** Argument quality and acceptance (Pre-reg H4a)

| | |
|---|---|
| Argument Quality | 0.17*** |
| | (0.01) |
| Age | -0.28*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.07** |
| | (0.02) |
| Income | 0.34*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.16*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.22*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Constant | 3.19*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -47,445.10 |
| Akaike Inf. Crit. | 94,922.20 |
| Bayesian Inf. Crit. | 95,054.60 |

*Note:* $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

**Table A3.5:** Argument quality and future trust (Pre-reg H4b)

| | |
|---|---|
| Argument Quality | 0.18*** |
| | (0.01) |
| Age | -0.35*** |
| | (0.03) |
| Male | 0.06*** |
| | (0.02) |
| University Education | 0.03 |
| | (0.02) |
| Income | 0.37*** |
| | (0.04) |
| Urban | 0.06*** |
| | (0.02) |
| DK | 0.04 |
| | (0.03) |
| NL | 0.03 |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.23*** |
| | (0.03) |
| Topic: Climate Change | -0.16*** |
| | (0.01) |
| Topic: Immigration | -0.31*** |
| | (0.01) |
| Topic: Trans | -0.12*** |
| | (0.01) |
| Constant | 3.02*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -41,181.61 |
| Akaike Inf. Crit. | 82,395.23 |
| Bayesian Inf. Crit. | 82,527.63 |

*Note:* $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

**Table A3.6:** Quality and expert binary interaction (Pre-reg H5)

| | |
|---|---|
| Argument Quality | 0.15*** |
| | (0.02) |
| Expert Binary | -0.004 |
| | (0.02) |
| Age | -0.28*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.07** |
| | (0.02) |
| Income | 0.34*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.16*** |
| | (0.03) |
| NL | 0.12*** |
| | (0.03) |
| UK | 0.22*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Argument Quality:Expert Binary | 0.03 |
| | (0.03) |
| Constant | 3.20*** |
| | (0.03) |

| | |
|---|---|
| Observations | 29,008 |
| Log Likelihood | -47,450.36 |
| Akaike Inf. Crit. | 94,936.73 |
| Bayesian Inf. Crit. | 95,085.68 |
| *Note:* | $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$ |

**Table A3.7:** Populism and expert binary interaction (Pre-reg H6)

| | |
|---|---|
| Populism | -0.37*** |
| | (0.09) |
| Expert Binary | 0.02 |
| | (0.03) |
| Age | -0.29*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.06** |
| | (0.02) |
| Income | 0.34*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Populism:Expert Binary | -0.07 |

| | |
|---|---|
| | (0.10) |
| Constant | 3.36*** |
| | (0.04) |
| Observations | 29,008 |
| Log Likelihood | -47,495.93 |
| Akaike Inf. Crit. | 95,027.87 |
| Bayesian Inf. Crit. | 95,176.82 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A3.8:** Populism and expert categorical interaction (Pre-reg H7)

| | |
|---|---|
| Populism | -0.37*** |
| | (0.09) |
| Government Source | 0.005 |
| | (0.03) |
| Independent Source | 0.04 |
| | (0.03) |
| Age | -0.29*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.06** |
| | (0.02) |
| Income | 0.34*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10*** |
| | (0.03) |
| UK | 0.21*** |
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |

| | |
|---|---|
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Populism:Government Source | -0.10 |
| | (0.12) |
| Populism:Independent Source | -0.04 |
| | (0.12) |
| Constant | 3.36*** |
| | (0.04) |
| Observations | 29,008 |
| Log Likelihood | -47,495.83 |
| Akaike Inf. Crit. | 95,031.65 |
| Bayesian Inf. Crit. | 95,197.16 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A3.9:** Populism and argument quality interaction: acceptance DV (Pre-reg H8a)

| | |
|---|---|
| Populism | -0.38*** |
| | (0.08) |
| Argument Quality | 0.18*** |
| | (0.02) |
| Age | -0.29*** |
| | (0.04) |
| Male | 0.04* |
| | (0.02) |
| University Education | 0.06** |
| | (0.02) |
| Income | 0.33*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.12*** |
| | (0.03) |
| NL | 0.10*** |
| | (0.03) |
| UK | 0.21*** |

| | |
|---|---|
| | (0.03) |
| US | 0.21*** |
| | (0.03) |
| Topic: Climate Change | -0.20*** |
| | (0.02) |
| Topic: Immigration | -0.36*** |
| | (0.02) |
| Topic: Trans | -0.11*** |
| | (0.02) |
| Populism:Argument Quality | -0.07 |
| | (0.10) |
| Constant | 3.29*** |
| | (0.04) |
| Observations | 29,008 |
| Log Likelihood | -47,427.26 |
| Akaike Inf. Crit. | 94,890.51 |
| Bayesian Inf. Crit. | 95,039.47 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

**Table A3.10:** Populism and argument quality interaction: future trust DV (Pre-reg H8b)

| | |
|---|---|
| Populism | -0.29*** |
| | (0.07) |
| Argument Quality | 0.21*** |
| | (0.02) |
| Age | -0.36*** |
| | (0.03) |
| Male | 0.06*** |
| | (0.02) |
| University Education | 0.02 |
| | (0.02) |
| Income | 0.36*** |
| | (0.04) |
| Urban | 0.07*** |
| | (0.02) |
| DK | 0.01 |
| | (0.03) |

| | |
|---|---|
| NL | 0.01 |
| | (0.03) |
| UK | 0.20*** |
| | (0.03) |
| US | 0.23*** |
| | (0.03) |
| Topic: Climate Change | -0.16*** |
| | (0.01) |
| Topic: Immigration | -0.31*** |
| | (0.01) |
| Topic: Trans | -0.13*** |
| | (0.01) |
| Populism:Argument Quality | -0.13 |
| | (0.08) |
| Constant | 3.09*** |
| | (0.03) |
| Observations | 29,008 |
| Log Likelihood | -41,165.01 |
| Akaike Inf. Crit. | 82,366.01 |
| Bayesian Inf. Crit. | 82,514.97 |
| *Note:* | *p < 0.05; **p < 0.01; ***p < 0.001 |

# A4 Populism facets: analysis and discussion

### A4.1 Populism facets: analysis and discussion

Populism is typically considered a multidimensional ideology, and is consequently usually measured using a multidimensional scale. In this article, we rely on the scale developed by Castanho Silva et al. (2018), which understands populism as composed by three clusters of attitudes and stances towards politics and society: 1) anti-elitism, 2) a Manichean outlook on politics with the good (my allies) and the evil side (my enemies), and 3) people-centrism: the idea of the homogenous good people as a political actor (Castanho Silva et al., 2018). Recent research in Italy and Turkey found that in both countries, anti-elitism and people-centrism were associated with distrust of national institutions as well as a conspiracy mentality. In contrast, Manichean outlook was either insignificantly associated with those, or associated with greater levels of trust and less of a conspiracy mentality (Erisen et al., 2021), with a similar finding in Castanho Silva et al. (2020). Wuttke et al., (2020) found that in 7 of 9 countries studied, people-centrism was associated with less institutional trust, while anti-elitism was associated with less trust in all 9. In contrast, a Manichean outlook was uncorrelated with institutional trust in 7 countries, and slightly positively associated with it in 2.

When regressing advice acceptance on all three populism facets together, it was only anti-elitism which demonstrated any statistically significant relationship with rejecting expert advice (*B = -0.54, p < 2e-16*). In fact, the other two facets showed a positive association with advice acceptance, although failing to reach statistical significance. To be more sure of these results we ran separate models for facet, excluding the other two. Again, anti-elitism was associated with less acceptance (*B = -0.51, p < 2e-16*), and both people-centrism (*B = -0.12, p < 0.7*) and a Manichean outlook (*B = -0.07, p < 0.20*) failed to reach significance, though both were now negatively associated with advice acceptance.

We considered that the inconsistent results across countries may be due to disparate effects of the facets, in different cultural contexts. Therefore, we examined each country individually, while pooling across cases (and including all facets in each model). In the UK, none of the three facets are significantly related to advice acceptance. In the US, we see that anti-elitism is associated with less advice acceptance (*B = -0.69, p < 1.80e-08*), while people-centrism is associated with more advice acceptance (*B = 0.39, p < 0.02*), as well as is a Manichean outlook (*B = 0.36, p < 0.004*). In the Czech Republic (B = -0.72, p < 5.86e-11), Denmark (B = -0.42, p < 1.76e-05), and the Netherlands (B = -0.78, p < 2.51e-13), only anti-elitism had a significant association with (less) advice acceptance. Why we see these different patterns is not clear to us. Future research could attempt to disentangle this.

For our study, these results indicate that only the anti-elitism facet of populism is associated with less acceptance of expert advice. That people-centrism showed no relationship with advice acceptance may seem to clash with previous research. Yet, this difference may represent an effect of studying our concrete scenarios, instead of broader measures of institutional trust. Future research can examine more closely how the different facets of populism relate to different forms of trust an acceptance in different contexts.

We think that there could be two primary interpretations of how these results impact the overall findings in the paper. First, it could be argued that, as populism represents a noncompensatory

concept (Erisen et al., 2021; Castanho Silva et al., 2018; Wuttke et al., 2020), for something to be driven by or in relationship with populism, the relationship should be with all three facets of populism, even if the three facets are distinct and only weakly correlated with each other. Alternatively, we would argue that, as these three facets are very distinct, the critical question is whether there is a relationship between the phenomenon in question and the overall populism scale – even if that relationship is largely driven by one or two of the facets. That said, regardless of one's definitional interpretation, we believe our findings contribute to the field's understanding about how those who score high in populism are likely to behave towards expert institutions – and why.

**References**

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